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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,417	07/03/2001	Michael R. Rosen	65219-A/JPW/PJP	3315
7590 04/06/2004				
Cooper & Dunham LLP 1185 Avenue of the Americas New York, NY 10036				
		EXAMINER WHITEMAN, BRIAN A		
		ART UNIT PAPER NUMBER 1635		

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/898,417

Applicant(s)

ROSEN ET AL.

Examiner

Brian Whiteman

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 15-35 is/are pending in the application.
- 4a) Of the above claim(s) 4-8, 17-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 15, 16, 32-35 is/are rejected.
- 7) ☒ Claim(s) 9-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Non-Final Rejection**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/17/04 has been entered.

Claims 1-12 and 15-35 are pending.

Applicant's traversal and the amendment to claims 1, 2, and 15 in paper filed on 2/17/04 is acknowledged and considered.

### ***Election/Restrictions***

Claims 4-8 and 17-31 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper filed 11/8/02.

**Note:** The statement by the examiner that, "Election was made with traverse" in the final rejection mailed on 9/23/03 is incorrect. The election was made without traverse. See paper mailed on 1/30/03.

Claims 10, 12, 33, and 35 are rejoined with the elected species because there is no prior art of record against claims 9 and 32.

***Specification***

The disclosure is objected to because of the following informalities: the status (e.g., pending, abandoned, patented US Patent No.) of US application listed in the cross reference is missing.

Appropriate correction is required.

***Claim Objections***

Claims 9 and 32-35 are objected to because of the following informalities: In view of the revised amendment practice 37 CFR 1.121 (Effective July 30, 2003) the status of the claims 9 and 32-35 is improper. The correct status for claims 9 and 32-35 is (previously presented).

Appropriate correction is required.

When filing the amendment to this instant action, applicants are reminded to follow the revised amendment practice 37 CFR 1.121. See 68 Fed. Reg. 38611 (June 30, 2003) or website <http://www.uspto.gov/web/patents/ifw/>.

Claims 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the connection between “compound” and the methods of “contacting”. It is not clear whether the compound in the last sentence applies only to “co-culturing the cell” or to all the modes of delivery.

Claims 33-35 are also rejected under 112 second paragraph because they are dependent on claim 32.

Recommend amending claim 32 to read as follows: -- The method of claim 1, wherein the compound is a nucleic acid encoding MiRP1 and HCN, and the nucleic acid is introduced into the cell by adenovirus infection, viral-mediated infection, liposome-mediated transfer, microinjection, electroporation or the cell is cultured in the presence of the nucleic acid.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Egde et al., (Cardiovascular Research 47:769-777, 2000) as evident by Xiao et al., (JBC, 269:19151-19156, 1994). Egde teaches a method of assaying how caffeine affects the beating rate of guinea pig cardiac myocytes using caffeine application under voltage clamp conditions (pages 769-770). Egde teaches measuring the beating rate before and after exposing the cells to caffeine (pages 770-771). Egde teaches using calcium sensitive dye indo-1 to measure the beating rate in the cardiac myocytes (pages 774-775).

Xiao teaches using a photodiode to measure indo-1 in cardiac cells (page 19152). Thus, the method taught by Egde would anticipate using photodiode in the method.

Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wheeler et al., (Anesthesiology 86:137-146, 1997) as evident by Xiao et al., (JBC, 269:19151-19156, 1994). Wheeler teaches studying the response of isolated rat heart cells to halothane, enflurane and isoflurane (page 137). Wheeler teaches measuring the beating rate before and after exposing the cells to the compounds (pages 137-138). Wheeler teaches measuring calcium concentration using the calcium-sensitive dye indo-1 (pages 137 and 139).

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Xiao teaches using a photodiode to measure indo-1 in cardiac cells (page 19152). Thus, the method taught by Wheeler would anticipate using photodiode in the method.

Claims 1, 2, 3, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawana et al., (Comp. Biochem Physiol, 107C: 295-304, 1994). Kawana teaches a method of assaying whether an agent affects the beating rate of cardiac myocytes (pages 296-299). Kawana teaches a) isolating myocytes from a heart of rat and plating the myocytes on a plate (page 296); b) pre-treating myocytes with propranolol (PROP) or a combination of PROP and prazosin (PRZ); c) measuring the beating rate of the myocytes before and after treatment of myocytes with a drug (page 297); d) comparing the beating rate before and after treatment (pages 299-303).

### ***Response to Arguments***

Applicant's arguments, filed, with respect to 112 first paragraph rejection have been fully considered and are persuasive. The rejection of claims 1, 2, 3, 9, 11, 15, 16, 32 and 34 has been withdrawn because of the amendment of the claims to recite -- beating rate of a cardiac cell --.

Applicant's arguments, filed, with respect to 112 second paragraph rejection have been fully considered and are persuasive. The rejection of claim 2 has been withdrawn because of the amendment of the claims to recite -- cardiac cell --.

### ***Conclusion***

Claims 9-12 and 32-35 are free of the prior art of record.

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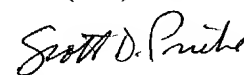
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Whiteman whose telephone number is (571) 272-0764. The examiner can normally be reached on Monday through Friday from 7:00 to 4:00 (Eastern Standard Time), with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, SPE - Art Unit 1635, can be reached at (571) 272-0760.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Brian Whiteman  
Patent Examiner, Group 1635

  
SCOTT D. PRIEBE, PH.D  
PRIMARY EXAMINER